

IN THE CLAIMS:

Claims 3, 7, 10, 13, 14, 16, 17 and 19 were previously cancelled. None of the claims have been amended herein. All of the pending claims are presented below for convenience of the Examiner. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as previously amended.

1. (Previously presented) A memory module, comprising:
a memory module carrier substrate;
a plurality of discrete memory devices disposed on the memory module carrier substrate; and
at least one discrete non-volatile storage device disposed on the memory module carrier substrate, the at least one discrete non-volatile storage device configured for storing data indicating a device location of at least one failing discrete memory device of the plurality of discrete memory devices;
wherein if a device location of at least one failing discrete memory device has been indicated, the memory module carrier substrate is in a repaired state subsequent to physical removal of the at least one failing discrete memory device at the device location and disposition of at least one replacement discrete memory device at the device location.
2. (Previously presented) The memory module of claim 1, wherein the at least one discrete non-volatile storage device is one of an EEPROM, an EPROM, a ferro-electronic device and a flash memory chip.
3. (Cancelled)
4. (Previously presented) The memory module of claim 1, wherein at least a portion of the plurality of discrete memory devices are fully functional dice.

5. (Previously presented) A computer system, comprising:
a processor; and
a memory module, comprising:
a memory module carrier substrate;
a plurality of discrete memory devices disposed on the memory module carrier substrate;
and
at least one discrete non-volatile storage device disposed on the memory module carrier substrate, the at least one discrete non-volatile storage device configured for storing data indicating a device location of at least one failing discrete memory device of the plurality of discrete memory devices;
wherein if a device location of at least one failing discrete memory device has been indicated, the memory module carrier substrate is in a repaired state subsequent to physical removal of the at least one failing discrete memory device at the device location and disposition of at least one replacement discrete memory device at the device location.
6. (Previously presented) The computer system of claim 5, wherein the at least one discrete non-volatile storage device is at least one of an EEPROM, an EPROM, a ferro-electronic device and a flash memory chip.
7. (Cancelled)
8. (Previously presented) The computer system of claim 5, wherein at least a portion of the plurality of discrete memory devices are fully functional dice.

9. (Previously presented) A method of testing a memory module, the method comprising:
testing a memory module including a memory module carrier substrate and a plurality of discrete memory devices disposed on the memory module carrier substrate;
identifying data indicative of a device location of at least one failing discrete memory device of the plurality of discrete memory devices;
storing the identified data on the memory module;
accessing the stored data and identifying the device location of the at least one failing discrete memory device;
physically removing the at least one failing discrete memory device from the device location; and
disposing at least one replacement discrete memory device at the device location of the at least one failing discrete memory device.

10. (Cancelled)

11. (Previously presented) The method of claim 9, wherein storing the identification of the at least one failed output further comprises storing data in at least one discrete non-volatile storage device on the memory module.

12. (Previously presented) The method of claim 11, further comprising selecting the at least one discrete non-volatile storage device from at least one of an EEPROM, an EPROM, a ferro-electronic device and a flash memory chip.

13. (Cancelled)

14. (Cancelled)

15. (Previously presented) A method of fabricating a memory module, the method comprising:
placing a plurality of discrete memory devices on a memory module carrier substrate;
testing each of a plurality of elements associated with each of the plurality of discrete memory devices on the memory module carrier substrate;
storing data indicative of a device location of at least one failing discrete memory device of the plurality of discrete memory devices;
subsequently accessing the stored data indicative of the device location of the at least one failing discrete memory device;
physically removing the at least one failing discrete memory device from the device location; and
placing at least one replacement discrete memory device at the device location of the at least one failing discrete memory device.

16. (Cancelled)

17. (Cancelled)

18. (Previously presented) The method of claim 15, further comprising testing the at least one replacement discrete memory device on the memory module substrate.

19. (Cancelled)